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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/535,161
Filing Date: May 16, 2005
Appellant(s): RIEMSCHNEIDER, KARL-RAGMAR

MAILED
JAN 2 2 2008
GROUP 2800

Michael Ure
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 08/14/2007 appealing from the Final Action mailed 03/15/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

1. Under 35 USC 102(a), claim 8 is anticipated by Potega.

2. Under 35 USC 103(a), claims 9 and 10 are unpatentable over Potega in view of Osborne.

3. Under 35 USC 103(a), claims 1-3, 5, and 11-19 are unpatentable over Osborne in view of Potega.

4. Under 35 USC 103(a), claims 1-5 are unpatentable over Imai in view of Potega.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6459175	Potega	10-2002
6583602	Imai et al.	6-2003

2004/0164706 U.S. PG Pub., Osborne "Battery Management System" 8-2004

(9) Grounds of Rejection

The following is the Final Action mailed on 03/15/2007

DETAILED ACTION

The applicant, in the remarks received 12/14/2006, did not address any of the previously presented objections to the specification and claims. These objections must be addressed in order to prevent abandonment of the application.

Specification

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a *separate sheet* is required.

The specification is objected to because it lacks the proper layout. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

Claims 1-19 are objected to because of the following informalities: "A" or "The" as appropriate should precede all the claims in order to make the preambles grammatically correct. For example, claim 1 should read "A system for automated management of batteries." Claim 2 should read "The system according to..." etc. Appropriate correction is required.

Claim 4 is objected to for omission of a word. The word "are" appears to be missing in line 3 between "cells" and "adjusted": "...plurality of battery cells adjusted to each other."

Claim 5 is objected to because line 4 reads "...surrounded by robust and chemically resistant material. Either the letter "a" is missing between "by" and "robust" *or* the singular "material" should be plural "materials". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

> (e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 8 is rejected under 35 U.S.C. 102(e) as being anticipated by Potega [U.S. 6459175].

With respect to claim 8, Potega discloses cell unit [Figs. 10 and 13; battery device 43/power source 701] for measuring physical parameters of battery cells [col. 49 lines 36-40], the cell unit comprising a cell unit transmitter for a transmission of the measured values of physical parameters of the battery cells via a wireless communication link [col. 54 lines 24-67 and col. 55 lines 1-15. Fig. 10 shows controllable regulator 25 that adjusts the output of charger 92 which charges battery device 43. Fig. 13 shows the two are in wireless communication across IR ports 713 and 729].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai et al. [U.S. 6583602] in view of Potega et al. [U.S. 6459175].

With respect to claim 1, Imai discloses system for automated management of batteries [col. 2 lines 5-10], the batteries [Fig. 2, battery 121, 122] comprising at least one battery cell [cells 111A-114A and 115A-119A], the system comprising: at least one cell unit [Fig. 3, comparators 34(1), 34(2)] for measuring physical parameters [the voltages of each cell are measured- col. 15 lines 48-52] of the at least one battery cell; a control unit [Fig. 3, logic circuit 35]; and a transmitter for transmitting the measured values of the physical parameters to the control unit via a communication link [the measured voltage values are transmitted from each comparator to the logic circuit 35 for processing, along the arrows indicated in Fig. 3; col. 15 lines 48-60]. Imai does not disclose a wireless communications link to transmit the measured values to the control unit.

Potega discloses a transmitter for transmitting the measured values of the physical parameters to the control unit via a first wireless communication link [col. 54 lines 24-67 and col. 55 lines 1-15. Fig. 10 shows controllable regulator 25 that adjusts the output of charger 92 which charges battery device 43. Fig. 13 shows the two are in wireless communication across IR ports 713 and 729].

Imai and Potega are analogous power supplies and means of controlling them.

It would have been obvious to one of ordinary skill in the art at the time of the invention to specify wireless as a means of data transmission as taught by Potega [col. 13 lines 31-34] between the cell unit [Fig. 10, battery device 43] and the control unit [Fig. 10, intelligent power supply 64] for the widely known benefits benefit of being able

to operate remotely over long ranges, as well as the cost savings involved in not having to run wire or fiber optics over great distances.

With respect to claim 4, Imai discloses that a battery [Fig. 2, battery 121, 122] comprises a plurality of battery cells [cells 111A-114A and 115A-119A], and wherein the switching unit [Fig. 2, switch 20] is adapted to perform a charge balancing [Fig. 2, SOC balancer 231, 232] such that charging states of the plurality of battery cells adjusted to each other [col. 14 lines 4-20].

With respect to claim 14, Imai discloses method [col. 2 lines 8-10] for automated management of batteries [col. 2 lines 5-10], the batteries [Fig. 2, battery 121, 122] comprising at least one battery cell [cells 111A-114A and 115A-119A], the method comprising the steps of: measuring of physical parameters [the voltages of each cell are individually measured- col. 15 lines 48-52] of the at least one battery cell by at least one cell unit [comparators 34(1), 34(2)]; transmitting the measured values of the physical parameters via a first communication link to a control unit [the measured voltage values are transmitted from each comparator to the logic circuit 35 for processing, along the arrows indicated in Fig. 3; col. 15 lines 48-60]. Imai does not disclose a wireless communications link to transmit the measured values to the control unit. Potega discloses the wireless link, as discussed above.

Claims 1-3, 5,11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osborne [U.S. 2004/0164706] in view of Potega et al. [U.S. 6459175].

With respect to claim 1, Osborne discloses system for automated management of batteries [page 1 par. 0001], the batteries [Fig. 2, batteries B1-B10] comprising at least one battery cell [B1 shows 2 cells], the system comprising: at least one cell unit [Fig. 2, battery/remote management unit 1] for measuring physical parameters [page 4 par. 0071] of the at least one battery cell; a control unit [central controller 3, page 3 par. 0064]; and a transmitter for transmitting the measured values of the physical parameters to the control unit via a communication link [Fig. 2, bidirectional RS485 communications link 13; page 3 par. 0064]. Osborne does not disclose a wireless communications link to transmit the measured values to the control unit.

Potega discloses a wireless means of communication, as described in above claim 1.

With respect to claim 2, Potega discloses that the control unit [Fig. 10, intelligent power supply 64] comprises a control unit transmitter [col. 54 lines 58-66] for transmitting control signals to the at least one cell unit [Fig. 10, battery device 43] via a second wireless communication link [Fig. 13, IR port 713 transmits bi-directionally to and from IR port 729].

With respect to claim 3, Potega discloses that a switching unit is provided; and wherein the switching unit [Fig. 2, switch 14] is adapted for temporarily establishing a controllable current path between poles of the at least one battery cell [from the power source 1 to the battery 5 positive, then returning through the negative post to the power source 1- col. 32 lines 45-56].

With respect to claim 5, Potega discloses the at least one cell unit [Fig. 10, battery device 43] is at least partially disposed in an interior region of the at least one battery cell for providing direct contact to an electrolyte [col. 49 lines 48-52- the green eye indicator is a type of hydrometer tester] of the at least one battery cell; and wherein the at least one cell unit is at least partially surrounded by robust and chemically resistant material [the green eye sensor will inherently be chemically resistant since it is designed to be used with battery electrolyte].

With respect to claim 6, Osborne discloses a communication link [page 3 par. 0064- RS485] between the cell units [battery/remote management unit (BMU) 1 with battery B1-B10] for direct communication with one another [page 3 par. 0069; each microcontroller 6 inside of each BMU 1 communicate with other microcontrollers 6].

With respect to claim 7 Osborne discloses that the at least one cell unit [battery/remote management unit (BMU) 1 with battery B1-B10] comprises at least one of: electric leads [Fig. 2, RS 485 lead 2 or the leads to power supply 14]; a storage [Fig. 2, battery B1-B10]; and a controllable rectifier/charger [Fig. 2, local battery charger 7; page 4 par. 0075; a controllable rectifier is implicit to this charger as evident from pars. 0077, 0078, and 0082]; wherein the storage is adapted for storing electric energy, and wherein the controllable charger is adapted for controlling the charging of the at least one battery cell [Fig. 2, page 4 par. 0077, 0078]. Osborne does not disclose the use of high frequency decouplers.

Potega discloses the use of powerline modulation, wherein the electric leads comprise high frequency decouplers for converting high frequency electromagnetic radiation into electric energy [col. 13 lines 31-42].

Osborne and Potega are analogous power management systems.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize powerline modulation as a means of communication between the cell unit and the controller for the known benefit of combining both the power supply and the data signals into the same transmission means. This has cost savings since an additional data transfer means, such as RS485, would no longer be required.

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potega et al. [U.S. 6459175] in view of Osborne [U.S. 2004/0164706].

With respect to claim 9, Potega discloses a switching unit [Fig. 2, switch 14] is provided; but does not disclose a charge balancing function across battery cells.

Osborne discloses that the switching unit [Fig. 2, relay 17] is adapted to perform a charge balancing such that the charging states of the battery cells [B1-B10] are adjusted to each other [page 4 par. 0066, 0075, 0082].

Osborne and Potega are analogous power management systems for batteries. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide multiple batteries, with a charge balancing function, to Potega for the benefit of extending the operational time of the supplied device 54 [laptops, etc.], and for the further benefit of extending the lifespan of the multiple batteries by ensuring they were all balanced.

With respect to claim 10, Osborne discloses that the at least one cell unit [battery/remote management unit (BMU) 1 with battery B1-B10] comprises at least one of: electric leads [Fig. 2, RS 485 lead 2 or the leads to power supply 14]; a storage [Fig. 2, battery B1-B10]; and a controllable rectifier/charger [Fig. 2, local battery charger 7; page 4 par. 0075; a controllable rectifier is implicit to this charger as evident from pars. 0077, 0078, and 0082]; wherein the storage is adapted for storing electric energy, and wherein the controllable charger is adapted for controlling the charging of the at least one battery cell [Fig. 2, page 4 par. 0077, 0078]. Osborne does not disclose the use of high frequency decouplers.

Potega discloses the use of powerline modulation, wherein the electric leads comprise high frequency decouplers for converting high frequency electromagnetic radiation into electric energy [col. 13 lines 31-42].

Osborne and Potega are analogous power management systems.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize powerline modulation as a means of communication between the cell unit and the controller for the known benefit of combining both the power supply and the data signals into the same transmission means. This has cost savings since an additional data transfer means, such as RS485, would no longer be required.

With respect to claim 11, Osborne discloses control unit [central controller 3, page 3 par. 0064] for receiving measured values of physical parameters of battery cells [page 4 par. 0071, 0072], the control unit comprising a control unit transmitter for transmitting control signals [page 3 par. 0069] to a cell unit [Fig. 2, battery/remote

management unit 1]; wherein the measured values are received via a first communication link; and wherein the control signals are transmitted via a second communication link [Fig. 2, bidirectional RS485 communications link 13; page 3 par. 0064]. Osborne does not disclose the communication link being wireless.

Potega discloses a wireless communication link [col. 54 lines 24-67 and col. 55 lines 1-15. Fig. 13 shows the two are in wireless communication across IR ports 713 and 729].

Imai and Potega are analogous power supplies and means of controlling them.

It would have been obvious to one of ordinary skill in the art at the time of the invention to specify wireless as a means of data transmission as taught by Potega [col. 13 lines 31-34] between the cell unit [Fig. 10, battery device 43] and the control unit [Fig. 10, intelligent power supply 64] for the widely known benefits benefit of being able to operate remotely over long ranges, as well as the cost savings involved in not having to run wire or fiber optics over great distances.

With respect to claim 12, Osborne discloses that the control signals provide synchronization information to the cell unit [page 4 par. 0073].

With respect to claim 13, Osborne discloses that the control unit addresses each cell unit individually; wherein the control unit initiates the measurement of the physical parameters of the battery cells; wherein the control unit requests the transmission of measured values of the physical parameters [page 4 par. 0073, 0074, 0081].

With respect to claim 14, Osborne discloses method for automated management of batteries [page 1 par. 0001], the batteries [Fig. 2, battery B1-B10] comprising at least

one battery cell [Fig. 2, 2 cells per battery are shown], the method comprising the steps of: measuring of physical parameters [page 4 par. 0071] of the at least one battery cell by at least one cell unit [Fig. 2, remote/battery management unit 1]; transmitting the measured values of the physical parameters via a first communication link to a control unit [page 4 par. 0072]. Osborne does not disclose a wireless communications link to transmit the measured values to the control unit.

Potega discloses a wireless communication link [col. 54 lines 24-67 and col. 55 lines 1-15. Fig. 13 shows the two are in wireless communication across IR ports 713 and 729].

Imai and Potega are analogous power supplies and means of controlling them.

It would have been obvious to one of ordinary skill in the art at the time of the invention to specify wireless as a means of data transmission as taught by Potega [col. 13 lines 31-34] between the cell unit [Fig. 10, battery device 43] and the control unit [Fig. 10, intelligent power supply 64] for the widely known benefits benefit of being able to operate remotely over long ranges, as well as the cost savings involved in not having to run wire or fiber optics over great distances..

With respect to claim 15, Osborne discloses individually controlling a charge of the at least one battery cell [0071]; transmitting individual control signals from the control unit to the at least one cell unit via a second communication link [page 3 par. 0064]. Osborne does not disclose wireless communications. Potega discloses the use of wireless communications, as recited in claim 14.

With respect to <u>claim 16</u>, Osborne discloses that each cell unit [Fig. 2, battery/remote management unit 1] measures the physical parameters of a respective group of battery cells [Fig. 2, battery B1-B10, page 4 par. 0071], the groups comprising at least one battery cell [two cells are shown for each battery in Fig., 2]; wherein each battery cell belongs to at least two groups [Fig. 2, the first group is battery B1 itself, which is a member of the group G1 in Fig. 1, which is itself a member of string 18]; wherein the measured values of the physical parameters of particular groups are subtracted from one another or otherwise processed for obtaining the physical parameters of individual battery cells [page 5 par. 0085- central controller 3 applies a boost charge between cells if it detects the voltages are too far out of range with each other. The same applies for discharging par. 0079. Subtraction is intrinsically taking place in the form of comparing a current charge to a known charge, then charging/discharging as needed to make up the difference].

With respect to <u>claim 17</u>, Potega discloses that a density or a fill level of electrolyte [col. 49 lines 48-52- the green eye gauge monitor detects specific gravity, which is density] in the at least one battery cell is measured by detecting a change in an emitted electromagnetic signal [the change is SOC due to change in specific gravity is transmitted wirelessly through IR ports 713 and 729].

With respect to <u>claim 18</u>, Potega discloses that signals are transmitted by at least one technique selected from the group consisting of: transmission of electromagnetic waves, inductive transmission, transmission of light, transmission of sound, and transmission of ac currents [col. 13 lines 31-42].

With respect to claim 19, Osborne disclose that a charge balancing is performed to adapt charges of a plurality of battery cells [page 4 par. 0066, 0075, 0082] to each other by temporarily establishing a current path [Fig. 2, through closing of relay 17] between poles of the plurality of battery cells [Fig. 2, B1-B10].

(10) Response to Argument

The following is in response to the **VII. ARGUMENT** section of the appeal brief

I. Rejection of Claim 8 as Anticipated by Potega

Appellant's first argument appears on page 7 of the appeal, and states that Potega [U.S. 6,459,175] does not teach **"measuring physical parameters of the battery cell and transmitting the measured values of the physical parameters (e.g., to a control unit) via a wireless communication link."**

Appellant acknowledges on page 7 that **"Fig. 13 does in fact illustrate wireless communication between an IR port 729 of a power supply 745 and an IR port 713 of a laptop computer."** The examiner agrees that there is a wireless link disclosed. As acknowledged by appellant on page 7, the point of contention is exactly what information is communicated across the wireless link.

Appellant argues on page 8 that **"no mention is made of anything that can be construed as "measured values of physical parameters of the battery cells"** as claimed.

The measurement of physical parameters of a battery cell within the battery charging art typically comprises measuring any one of battery voltage, current, temperature, electrolyte level, charging rate, state of charge, charge/discharge cycles, battery chemistry, battery manufacturer, etc. Other non-typical measurements include parameters such as polarization, acid sulfation, electrolyte density, gas evolution, etc.

The examiner has interpreted the recitation "physical parameters of the battery cell" to mean that which is consistent in the art, as described in the paragraph above. This is also consistent with appellant's own specification on page 3, reproduced below:

> [0013] The physical properties of the battery cells measured by the cell units may comprise a voltage between poles of the battery cells, a time interval, in which the voltage between poles of the battery cells changes by a certain amount, a temperature of the electrodes or electrolyte of a battery cell, and a filling level of electrolyte solution or electrolyte density of the electrolyte of a battery cell. There are, of course, many more physical parameters which may be measured by the cell units, for example, the atmospheric pressure inside an individual battery cell, the gas concentration inside an individual battery cell, the color or the absorption coefficient of the electrolyte, and changes in the viscosity of the electrolyte.

Therefore, there are no misunderstandings concerning the interpretation of physical parameters of a battery cell. U.S. 6,459,175 by Potega measures voltage [among other things] which is a physical parameter of a battery cell.

According to appellant, the primary reference Potega [U.S. 6,459,175] fails to teach physical parameters of a battery cell being transmitted over a wireless communication link.

Potega discloses a power supply [Fig. 1, 2] and a smart battery [Fig. 1, 5] which supply power to a supplied device [Fig. 1, 12- in one case a laptop computer], via a universal connector [Fig. 1, shown here as lines 3 and 4]. In **col. 48 lines 66-67 and col. 9 lines 1-3**, Potega states that power supply 2 detects and reads battery 5's voltage... reproduced below.

> regulated port at the seat.
>
> Thus, in FIG. 1, power supply **2** detects and reads battery's **5** voltage (either as data, if battery **5** is data

enabled, or as direct voltage being conducted from battery **5** along conductor **6**, to conductive surface **9** of connector **8**, then along powerline 4 to power supply **2**). If power supply

Potega goes on to disclose in **col. 50 lines 35-47** that the power supply module can monitor the number of charge/discharge cycles, amount of time a battery can remain in use [all of which are physical battery parameters] etc., reproduced below.

data acquisition features of a "smart" battery. For example, the power supply module can monitor the number of charge/discharge cycles, assuming that there is only one battery pack available for the host device. It can also track the amount of time a battery is in use, and correlate that to the power load of the host device (by sampling the number of watts used during the supplied device's time of operation), and thus provide a reasonable battery "fuel gauge." If there is an appropriate communications link to the host device, as provided in FIG. **10** by the connector's **42** conductors **69, 70, 71, 74, 75**, and **76**, the power supply module can warn the end user of a battery pack which has reached a dangerously low state of charge. Since the power supply module **26** or **64**

Therefore Potega discloses monitoring of physical parameters of a battery cell.

Potega further discloses that the monitored physical parameters of the battery cell is transmitted to a host device via wireless link [shown in Fig. 13 as IR Port 729 of the power supply and IR port 713 of the Supplied Device], in **col. 54 lines 54-67 and col. 55 lines 1-3**, reproduced below.

With this implementation, a logic board can be integrated into the existing circuit which has, for example, an infrared circuit. Thus IR-configured, the data link between a supplied device's software and the controllable power supply can be wireless.

One way of achieving this wireless link is shown in FIG. **13**, where the power supply is controlled by a separate device, here an MCU (Master Control Unit) which is communicating via infrared with supplied device. Other wireless communication links have been discussed in FIG. **10** and elsewhere in this document. For many of these, including some versions of IR, a parallel port implementation is

> available, but the serial port affords better communication opportunities, since it is a digital port not dependent on analog voltages on wired cables.

Multiple other embodiments throughout Potega, for example in Figs. 1, 5, and 13, along with their corresponding descriptions, illustrate this. With respect to the battery parameters being measured, Potega states **in col. 15 lines 11-16:**

> by inserting connector **8**, power supply **2** reads information from battery **5** as to the appropriate voltage needs of supplied device **12**, without any direct dependency on supplied device **12** for such information. Connector **8** also

Col. 22 lines 8-11 again state a battery parameter is monitored:

> Controllable regulator **264** can have a logic circuit, which may have some minimal processor/memory (not shown) which reads the charge state or battery **208**. Such an intel-

Col. 22 lines 25-35 further state that this battery data is sent along datalines 254, 196, 204 to the supplied device:

> In FIG. **5**, supplied device **206** has a data link to the controlling devices external to it. It can configure controllable switch **184** to route power from either **208** or controllable regulator **264**, or even auxiliary battery **290**. The supplied device makes this determination on data available to it from both battery **208** and controllable regulator **264**, via A/D converter **260** and along datalines **254, 196, 204** to supplied device **206**, then back via lines **204** and **196** to configure switch **184**, then further along to dataline **256** to configure (or temporarily deactivate) controllable regulator **264**. Thus, supplied device **206** polls the two power sources,

Col. 34 lines 32-46 state that the battery data [i.e. the physical parameter] is looped to the supplied device 54 via wireless transmission:

lable regulator **264**. The voltage of battery device is determined by configuring multi-selector switch **184** so that voltage sensor **272** can establish the correct voltage of the battery. A load is induced onto the battery's powerlines **200**, by configuring multi-selector switch **184** so that power from battery **208** conducts along lines **200** into the switch, then power lines **194** and **198**, and the pair labeled **202**. Thus configured, battery **208** is directly powering supplied device **206** so that voltage sensor **282** can read the line voltage. The voltage reading is sent to the A/D converter **260** via lines **270** and **278** (switch **184** is this reconfigured), and it is then looped to the supplied device **264** either by the same path previously described, i.e., lines **254**, **196** and **204**, or it is sent to another port for wired or wireless transmission to the supplied device.

As can be seen, **Potega clearly teaches both parts of the limitation in question; firstly that a battery parameter(s) is measured, and secondly that the measured battery parameter(s) is transmitted over a wireless link.**

II. Rejection of Claims 9 and 10 As Unpatentable Over Potega In View of Osborne

The appellant repeats the same arguments on pages 8 and 9, that Potega [U.S. 6,459,175] does not teach **"measuring physical parameters of the battery cell and transmitting the measured values of the physical parameters (e.g., to a control unit) via a wireless communication link."** As shown previously, Potega clearly teaches all of this.

<u>**III. Rejection of Claims 1-3, 5, and 11-19 As Unpatentable Over Osborne In View of Potega**</u>

The appellant repeats the same arguments on page 9, that Potega [U.S. 6,459,175] does not teach **"measuring physical parameters of the battery cell and transmitting the measured values of the physical parameters (e.g., to a control unit) via a wireless communication link."** As shown previously, Potega clearly teaches all of this.

<u>**IV. Rejection of Claims 1-5 As Unpatentable Over Imai In View Of Potega**</u>

The appellant repeats the same arguments on page 10, that Potega [U.S. 6,459,175] does not teach **"measuring physical parameters of the battery cell and transmitting the measured values of the physical parameters (e.g., to a control unit) via a wireless communication link."** As shown previously, Potega clearly teaches all of this.

<u>Final Point of Note:</u> the remaining references by Imai [U.S. 6, 583, 602] and Osborne [U.S. 2004/0164706] used in the current Final Action all disclose the measurement of battery parameter(s) by a cell unit **[battery management unit 1 of Fig. 1 in Osborne; comparators 34 in Fig. 3 of Imai]** with subsequent <u>wired</u> transmission of data to a controller **[central controller 3 in Fig. 1 of Osborne; logic circuit 35 in Fig. 3 of Imai].** The primary use of Potega is to teach the transmission of the battery parameter being accomplished via a <u>wireless</u> link, instead of a wired link.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Richard V. Muralidar/

Conferees:

David Blum

Bao Vu

Richard Muralidar